

INTERNATIONAL SEARCH REPORT

International application No.

PCT/JP03/06422

A. CLASSIFICATION OF SUBJECT MATTER

Int.Cl⁷ A61K31/235, A61P31/12, 31/18

According to International Patent Classification (IPC) or to both national classification and IPC

B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

Int.Cl⁷ A61K31/235, A61P31/12, 31/18

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)
CAPLUS (STN), CAOLD (STN), REGISTRY (STN), MEDLINE (STN),
BIOSIS (STN), EMBASE (STN)

C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	WO 01/82927 A1 (LEAD CHEMICAL CO., LTD.), 08 November, 2001 (08.11.01), Page 7; tables 1 to 3 (Family: none)	1, 4, 7-14 5, 6 2, 3
X Y A	US 6268395 B1 (LEAD CHEMICAL CO., LTD.), 31 July, 2001 (31.07.01), Tables 1 to 3 & JP 2001-139468 A	1, 4 5-14 2, 3
X Y A	EL-MEKKAWY S., "Inhibition of Cytopathic Effect of Human Immunodeficiency Virus Type-1 by Various Phorbol Derivatives.", Chem.Pharm.Bull., 2002, Vol.50, NO.4, pages 523 to 529	1, 4, 6 5, 7-14 2, 3

☒ Further documents are listed in the continuation of Box C. ☐ See patent family annex.

* Special categories of cited documents:	"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention
"A" document defining the general state of the art which is not considered to be of particular relevance	"X" document of particular relevance; the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone
"E" earlier document but published on or after the international filing date	"Y" document of particular relevance; the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art
"L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)	"&" document member of the same patent family
"O" document referring to an oral disclosure, use, exhibition or other means	
"P" document published prior to the international filing date but later than the priority date claimed	

Date of the actual completion of the international search
17 June, 2003 (17.06.03)

Date of mailing of the international search report
01 July, 2003 (01.07.03)

Name and mailing address of the ISA/
Japanese Patent Office

Authorized officer

Facsimile No.

Telephone No.

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C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X Y A	EL-MEKKAWY S., "12-0-Acetylphorbol-13-decanoate Potently Inhibits Cytopathic Effects of Human Immunodeficiency Virus Type 1 (HIV-1), without Activation of Protein Kinase C.", Chem.Pharm.Bull., 1999, Vol.47, No.9, pages 1346 to 1347	1,4 5-14 2,3
X Y A	EL-MEKKAWY S., "Anti-HIV-1 phorbol esters from the seeds of Croton tiglium.", Phytochemistry, 2000, Vol.53, No.4, pages 457 to 464	1,4 5-14 2,3
X Y A	MAIO J.J., "Regulation of expression driven by human immunodeficiency virus type 1 and human T-cell leukemia virus type I long terminal Repeats in pluripotential human embryonic cells.", J.Virol., 1988, Vol.62, No.4 pages 1398 to 1407	1,4 5-14 2,3
Y	KINZEL V., "Stimulation of choline incorporation in cell cultures by phorbol derivatives and its correlation with their irritant and tumor-promoting activity", Cancer Research, 1979, Vol.39, No.7, pages 2743 to 2750	5
Y	Chem.Abstr., Vol.70, No.4, 1969, pages 359 to 360, abstract No. 70:47626, KREIBICH G., "Chemistry of phorbol. V. Phorbol ethers", Chemie,Biochemie. Biophysik.Biologie., 1968, Vol.23, No.11, pages 1444 to 1452	5

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Box I Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☐ Claims Nos.:
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:
3. ☐ Claims Nos.:
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

Box II Observations where unity of invention is lacking (Continuation of item 3 of first sheet)

This International Searching Authority found multiple inventions in this international application, as follows:

The matter common to claims 1 to 14 resides in an antiviral preparation containing a phorbol derivative represented by the formula 1 as the active ingredient. However, this had been publicly known as reported in document (WO 01/82927 A1 (LEAD CHEMICAL Co., Ltd.) 08 November, 01 (08.11.01), etc.

Also, the preparations comprising phorbol derivatives represented by the formula 1 together with another anti-HIV viral drugs as set forth respectively in claims 7, 8, 9, 10, 11, 12, 13 and 14 had been publicly known. Thus, it cannot be considered that there is a technical relationship between these groups of inventions involving one or more of the same or corresponding special technical features and these groups of inventions (continued to extra sheet)

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☒ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☐ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.:

Remark on Protest ☐ The additional search fees were accompanied by the applicant's protest.
☐ No protest accompanied the payment of additional search fees.

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Continuation of Box No.II of continuation of first sheet(1)

are not considered as relating to a group of inventions so linked as to form a single general inventive concept.

Such being the case, this international application has 9 groups of inventions in claims 1 to 14.